

In re Appln. of: Dale Hunsberger, et al.  
Serial No.: 08/908,896

As a preliminary matter, Applicant affirms his election of Group I claims, claims 1-15, and has appropriately canceled claims 16-19 without traverse and without prejudice. With regard to the indefiniteness rejections under § 112, Applicant has amended claim 1 such that preamble of claim 1 now specifies that the housing surrounds the motor. It is noted that in Fig. 1, Ref. 26 refers to the motor housing and it is illustrated as surrounding the motor itself as well as part of the pump body 24 which extends up into the motor and also closes the first open end of the motor housing. In view of the foregoing, Applicant respectfully requests removal of the indefiniteness rejection of claim 1. The indefiniteness rejections of claims 12 and 13 are moot by virtue of their cancellation.

Claim 1 has been amended to include the common subject matter of claims 2, 6 and 9, which the Patent Examiner has indicated would be allowable. In particular, claim 1 has been amended to recite that the plastic end plate includes first and second layers and that the metal annular ring is sandwiched between the first and second layers. Because claim 1 now includes allowable subject matter that has been indicated by the Examiner, Applicant respectfully requests an indication of allowance of claims 1-10. Because claim 1 has been amended to incorporate the allowable subject matter indicated by the Patent Examiner, the rejection of claim 1 is now moot.

Turning to the rejection of claims 11-15, claim 11 was rejected as being anticipated either Aller or Schirmer. Claims 12 and 13 were rejected as being obvious over Schirmer in view of Laing. Claims 14 and 15 were rejected as being obvious over Aller.

In response, Independent claim 11 has been canceled and new claims 20-26 have been added to more clearly define the present invention over the prior art cited by the Patent Examiner. In particular, both independent claims 20 and 22 both recite the following:

1. the end shield closes the second open end;
2. the end shield does not support the rotor in any way, (an antecedent for this limitation for purposes of definiteness is provided in both claims which specify that the rotor is supported for rotation "only" by the body); and
3. the end shield is completely free of the rotor and covers the radial span of the stator such that the shield is subject to a potential drum reverberation effect.

These claim recitations now make it crystal clear that the end shield and associated pump/motor is of the type which is particularly susceptible to drum-like reverberations in the end shield. Neither Schirmer nor Aller disclose an end shield which is subject to drum-like reverberations or which meets these claim recitations.

Schirmer discloses an end bell member 2' (See Fig. 1 of Schirmer) which contains bearings and directly supports the shaft end of the rotor. As such, the limitations identified by numbers 2 and 3 of the previous paragraph are not taught by any of the new claims, claims 20-

26. In Schirmer, the fact that the end bell member 2' directly supports the rotor means that the pump/motor as a result is of a significantly different construction for different applications than the type of pump/motor to which the present invention is concerned. As such, Schirmer does not disclose the problem of the prior art nor the solution of the present invention. The end shield of the present invention does not support the rotor in any way but simply acts as an end shield to cover the opening in the housing and the exposed end of the motor. Thus, the type and application of the two different pump/motors are significantly different. The claims now make clear that the end shield is of the type which serves a covering function and not a rotor supporting function and as such the end shield of the present invention would otherwise be subject to drum-like reverberation and noise production, but for the present invention. Because Schirmer does not disclose the problem nor the solution of the present invention, it is submitted that the claimed invention of claims 20-26 are not obvious over Schirmer either singly or in combination with any other prior art of record.

Aller discloses an assembly at the end of the small pump which includes a clamp ring 21 that has an inner diameter that is larger than the outer diameter of the housing sections 41 (See FIG. 4 disclosing how the clamp ring slides over the housing), a shroud 23 for covering the motor, and a stator located in cap 33 which includes conventional brushes and contacts (See Aller, col. 2, lines 43-46). The type and application of the pump/motor disclosed in Aller is very distinct from the pump/motor disclosed in the present invention. Aller as such does not meet the limitations of the pump itself recited in independent claims 20 and 22, which both recite:

“a pump contained in a body;

a motor including a rotor and a stator, the stator supported by the body, the rotor mechanically linked to the pump and supported for rotation only by the body;

a motor housing having first and second open ends, the body closing the first open end ...”

In particular, there is no pump body separate from the motor housing in Aller. Moreover, Aller does not disclose that the stator is supported by the pump body. Specifically, the pump and stator are located at the opposing ends of the motor housing in Aller. Moreover, the inherently small size of the pump/motor disclosed in Aller would eliminate any noise and reverberation problems. As such, the pump/motor of Aller is not subject to a potential drum reverberation effect. In contrast to Aller, the radial span of the pump/motor of the present invention is large and the end shield of the present invention covers a radial span where noise and reverberation has been problematic in the prior art. As such, claims 20 and 22 are not anticipated by Aller.

Aller also does not disclose “a central mass disrupting the shape of the end shield to prevent the potential drum reverberation effect” as is recited by independent claim 20, nor

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“a metal annular ring secured to the motor housing and extending radially inward from the motor housing to cover a portion of the motor” or an “end shield being constructed from multiple pieces to prevent the potential drum reverberation effect” as is recited by independent claim 22. The clamping ring 21 asserted by the Patent Examiner slides easily over the motor housing 41 as shown in FIG. 4 of Aller, and is not part of an end shield. Specifically the clamping ring 21 of Aller does not extend radially inward from the motor housing to cover a portion of the motor as is recited in claim 22. For these additional reasons, it is submitted that claims 20-26 are not anticipated by Aller. Because Aller also does not disclose the problem of the prior art nor the solution of the present invention, it is respectfully submitted that claims 20-26 are not obvious over Aller, either singly or in combination with other prior art references.

Considering the invention as now defined in claims 20-26, a conclusion of obviousness cannot be supported by either Aller or Schirmer. The conclusion as to the obviousness of an invention turns on whether a hypothetical person with ordinary skill and knowledge in the art to which the invention pertains with full knowledge of all the pertinent prior art, when faced with the problem to which the claimed invention is addressed, would be led naturally to the solution adopted in the claimed invention or at least would naturally view that solution as an available alternative. *See eg. Monarch Knitting Machinery Corp. v. Fukuhara Industrial & Trading Co., Ltd.*, 139 F.3d 877, 45 USPQ2d 1977 (Fed. Cir. 1998) (“To ascertain the scope of the prior art, a court examines ‘the field of the inventor’s endeavor,’ ... and ‘the particular problem with which the inventor was involved,’ ... at the ‘time the invention was made,’ ... . Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness). *See also In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992) (1992) (“Patent examination is necessarily conducted by hindsight, with complete knowledge of the applicant’s invention, and the courts have recognized the subjective aspects of determining whether an inventor would reasonably be motivated to go to the field in which the examiner found the reference, in order to solve the problem confronting the inventor .... [I]t is necessary to consider ‘the reality of the circumstances,’ ...--in other words, common sense--in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor .... The combination of elements from non-analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness.”).

Here because Aller and Schirmer do not disclose the problem nor the solution of the present invention, it is submitted that the claimed invention of claims 20-26 can not be obvious over Aller, or Schirmer or any other prior art of record. Specifically, neither of these references contain the specific problem set forth and solved by the present invention, nor, do they teach the solution of the present invention. Considering the invention as now defined, both Aller and

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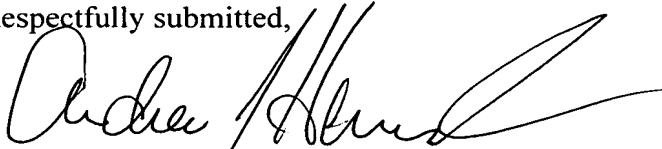
Schirmer either singly or in combination with other references cannot be used to sustain an obviousness type rejection. In view of the foregoing remarks and amendments, it is respectfully requested that the Patent Examiner remove his remaining rejections on the prior art of record.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue.

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Andrew J. Heinisch, Registration No. 43666  
One of the Attorneys for Applicant(s)  
LEYDIG, VOIT & MAYER, LTD.  
6815 Weaver Road, Suite 300  
Rockford, IL 61114-8018  
Telephone: (815) 963-7661  
Facsimile: (815) 963-7664

Date: December 20, 1999